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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/725,437	11/29/2000	Farooq Ullah Khan	7-54	9500

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Docket Administrator (Room 3C-512)  
Lucent Technologies Inc.  
600 Mountain Avenue  
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EXAMINER

LOGSDON, JOSEPH B

ART UNIT	PAPER NUMBER
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2662

DATE MAILED: 03/11/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/725,437

Applicant(s)

KHAN ET AL.

Examiner

Joe Logsdon

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 7.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

**Warning:**

1. Applicant is advised that should claim 9 be found allowable, claim 10 will be objected to under 37 CFR 1.75 as being a substantial duplicate thereof. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

**Claim Rejections—35 U.S.C. 103(a):**

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

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4. Claims 1 and 3-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Subbiah et al.

With regard to claim 1, Subbiah et al. teaches attaching a sequence identifier ("sequence number") and a user identifier to sub-packets ("mini packets") (abstract; column 5, lines 22-37). These sub-packets are inherently transmitted and received. Subbiah et al. fails to teach the use of packet identifiers. It would have been obvious to one of ordinary skill in the art to use packet identifiers because such an arrangement would enable the receiver to know with which previously transmitted packets currently re-transmitted packets should be combined to correct errors.

With regard to claim 3, Subbiah et al. fails to teach that the sequence identifier comprises more than one bit for indicating a transmission sequence of the first sub-packet. It would have been obvious to one of ordinary skill in the art to modify the invention of Subbiah et al. so that the sequence number comprises more than one bit because such an arrangement would enable the system to handle long packet sequences.

With regard to claim 4, Subbiah et al. fails to teach that an encoder packet identifier comprises one bit if the parallel channel encoder packet transmission system has two channels. It would have been obvious to one of ordinary skill in the art to modify the invention of Subbiah et al. so that it teaches that an encoder packet identifier comprises one bit if the parallel channel encoder packet transmission system has two channels because such an arrangement would enable the channel to be identified by the encoder packet identifier.

With regard to claim 5, Subbiah et al. fails to teach that an encoder packet identifier comprises two bits if the parallel channel encoder packet transmission system has four channels.

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It would have been obvious to one of ordinary skill in the art to modify the invention of Subbiah et al. so that it teaches that an encoder packet identifier comprises two bits if the parallel channel encoder packet transmission system has four channels because such an arrangement would enable the channel to be identified by the encoder packet identifier.

5. Claims 2 and 6-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Subbiah et al. in view of Rathonyi et al.

With regard to claim 2, Subbiah et al. fails to teach that the sequence identifier comprises one bit for indicating a first transmission or a re-transmission. Rathonyi et al. teaches the indication of whether a packet is being transmitted for the first time or re-transmitted (abstract; column 15, lines 41-54). It would have been obvious to one of ordinary skill in the art to modify the invention of Subbiah et al. so that the sequence identifier comprises one bit for indicating a first transmission or a re-transmission because such an arrangement would be a convenient way to indicate whether a packet is being transmitted for the first time or re-transmitted.

With regard to claim 6, Subbiah et al fails to teach receiving a NACK from the user identified by the user identifier; attaching a second sequence identifier, the user identifier, and the encoder packet identifier to a new version of the first sub-packet to produce a new version sub-packet with identifiers, the new version first sub-packet being soft-combinable with the first sub-packet, the second sequence identifier indicating that the new version sub-packet is a retransmission of the first sub-packet; and transmitting the new version sub-packet with identifiers. Rathonyi et al. teaches receiving a NACK from the user identified by the user identifier Fig. 3D); attaching a second sequence identifier ("sequence number, NS") to a new

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version of the first sub-packet to produce a new version sub-packet with identifiers (column 10, lines 4-8), the new version first sub-packet being soft-combinable with the first sub-packet (column 14, lines 22-41). Neither Subbiah et al. nor Rathonyi et al. teaches that the second sequence identifier indicates that the new version sub-packet is a retransmission of the first sub-packet. It would have been obvious to one of ordinary skill in the art to modify the invention of Subbiah et al. so that it teaches receiving a NACK from the user identified by the user identifier; attaching a second sequence identifier ("sequence number, NS") to a new version of the first sub-packet to produce a new version sub-packet with identifiers, the new version first sub-packet being soft-combinable with the first sub-packet because such an arrangement would reduce overhead while at the same time increasing the probability of correct sub-packet decoding. It would have been obvious to one of ordinary skill in the art to modify the invention of Subbiah et al. so that it teaches that the second sequence identifier indicates that the new version sub-packet is a retransmission of the first sub-packet because such an arrangement would enable the receiver to determine whether the two sub-packets should be soft-combined.

With regard to claim 7, Subbiah et al. fails to teach that both sub-packets are identical. It would have been obvious to one of ordinary skill in the art to modify the invention of Subbiah et al. so that both sub-packets are identical because such an arrangement would allow the system to work when conventional ARQ is employed.

With regard to claim 8, Subbiah et al. fails to teach that both sub-packets are different. It would have been obvious to one of ordinary skill in the art to modify the invention of Subbiah et al. so that both sub-packets are different because such an arrangement would allow the system to benefit from the use of soft-combining.

With regard to claims 9 and 10, Subbiah et al. fails to teach that both sub-packets with identifiers are transmitted over different channels. It would have been obvious to one of ordinary skill in the art to modify the invention of Subbiah et al. so that it teaches that both sub-packets with identifiers are transmitted over different channels because such an arrangement would allow for reuse of the identifiers by multiplexing the sub-packets over different channels.

With regard to claim 11, Subbiah et al. teaches attaching a sequence identifier ("sequence number") and a user identifier to sub-packets ("mini packets") (abstract; column 5, lines 22-37). These sub-packets are inherently transmitted and received. Subbiah et al. fails to teach the use of packet identifiers; using the user identifier to determine whether the sub-packet is destined for the receiver; determining whether the received sub-packet is a retransmission; and soft combining retransmissions with first transmissions. Rathonyi et al. teaches soft-combining of re-transmitted sub-packets (abstract; column 14, lines 22-41). Rathonyi et al. teaches that soft-combining offers the advantage of increased probability of successful decoding. It would have been obvious to one of ordinary skill in the art to modify the invention of Subbiah et al. so that it teaches using the user identifier to determine whether the sub-packet is destined for the receiver because such an arrangement would prevent the waste of channel capacity that would result from the receiver receiving packets not intended for it. It would have been obvious to one of ordinary skill in the art to use packet identifiers because such an arrangement would enable the receiver to know with which previously transmitted re-transmitted packets should be combined to correct errors. It would have been obvious to one of ordinary skill in the art to modify the invention of Subbiah et al. to include soft-combining, as in Rathonyi et al. because such an arrangement would increase the probability of successful decoding.

With regard to claim 12, Subbiah et al. fails to teach that the received sub-packet and the previously received sub-packet having identical encoder packet identifiers were received over different channels. It would have been obvious to one of ordinary skill in the art to modify the invention of Subbiah et al. so that it teaches that the received sub-packet and the previously received sub-packet having identical encoder packet identifiers were received over different channels because such an arrangement would allow reuse of the packet identifiers, i.e., the same packet identifier could be used over multiple channels.

With regard to claim 13, Subbiah et al. fails to teach that the received sub-packet and the previously received sub-packet having identical encoder packet identifiers were received over identical channels. It would have been obvious to one of ordinary skill in the art to modify the invention of Subbiah et al. so that it teaches that the received sub-packet and the previously received sub-packet having identical encoder packet identifiers were received over identical channels because such an arrangement would allow sub-packets to be multiplexed based on their packet identifiers.

### **Conclusion**

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joe Logsdon whose telephone number is (703) 305-2419. The examiner can normally be reached on Monday through Friday from 10:00 am to 6:30 pm.



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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hassan Kizou, can be reached on 703-305-4744. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Joe Logsdon

Patent Examiner

Wednesday, February 25, 2004



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SUPERVISORY PATENT EXAMINER  
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